

Broadband Amplifier, 0.01 to 20 GHz, 40 dB Gain, 14 dBm P_{1dB}

Description:

Model SBB-0112034014-SFSF-E3 is a broadband amplifier with a typical small signal gain of 40 dB, a nominal P_{1dB} of +14 dBm, and a typical noise figure of 6.0 dB across the frequency range of 0.1 to 20 GHz. The DC power requirement for the amplifier is +12 V_{DC}/180 mA. The use of a heat sink is advised to assist in cooling the device. The RF connectors are female SMA connectors. Other port configurations are available under different model numbers.



Features:

- Broadband Coverage
- Good Gain Flatness

Applications:

- RF Microwave & VSAT
- Wireless Infrastructure
- Test Equipment

Electrical Specifications:

Parameter	Condition	Minimum	Typical	Maximum
Frequency		0.01 GHz		20.00 GHz
Gain			40 dB	
P _{1dB}			+14 dBm	
P _{sat}			+15 dBm	
Noise Figure	10 MHz – 100 MHz		15 dB	
Noise Figure	100 MHz – 20 GHz		6.0 dB	
P _{in}				-15 dBm
Input Return Loss			12 dB	
Output Return Loss			12 dB	
DC Voltage			+12 V _{DC}	
DC Supply Current			180 mA	
Specification Temperature			+25 °C	
Operating Temperature		0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input	SMA (F)
Output	SMA (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Size	1.38" (L) x 1.58" (W) x 0.47" (H)
Outline	BG-ZC-1

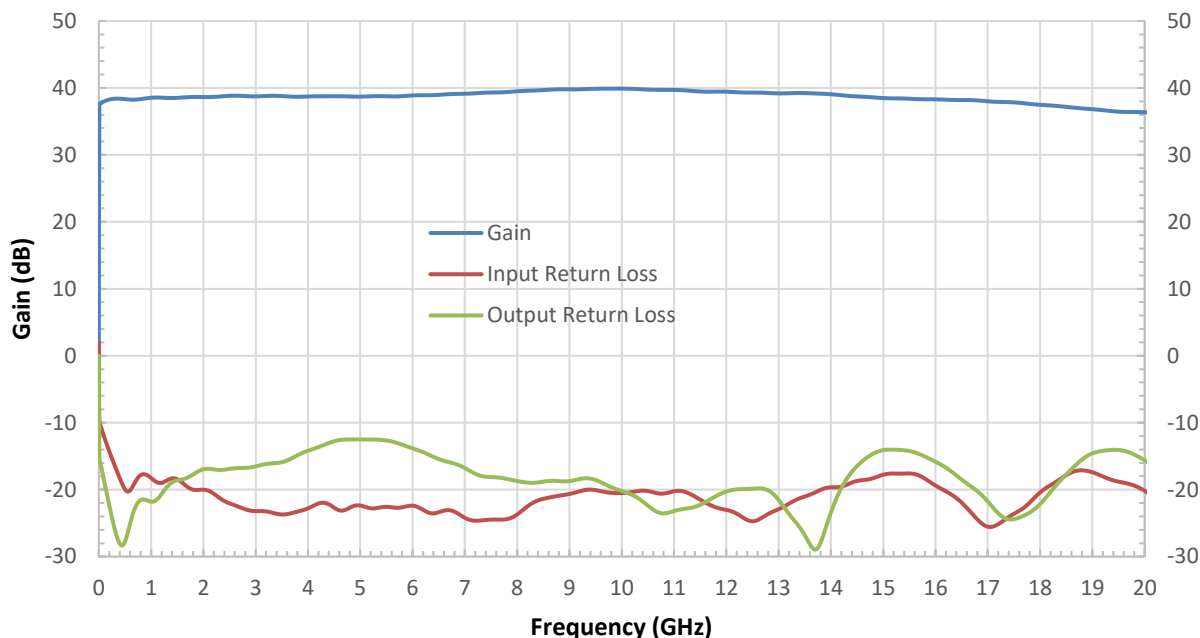




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Gain and Return Loss vs. Frequency

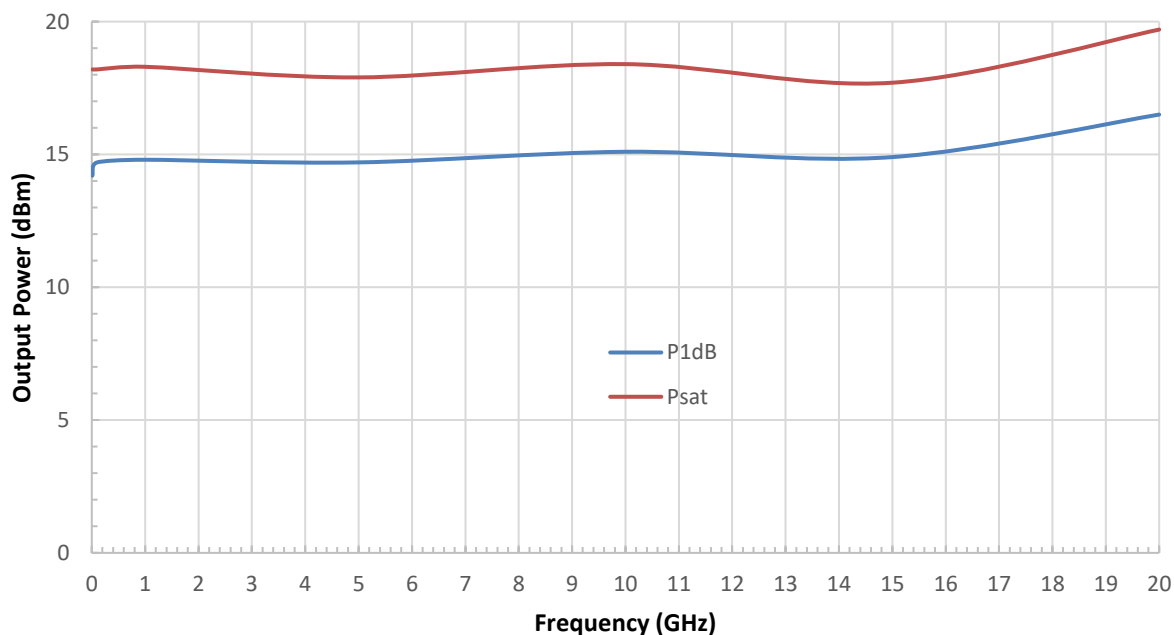
Bias: +12 V_{DC}/217 mA



Output Power vs. Frequency

Bias: +12V_{DC}/ 217mA

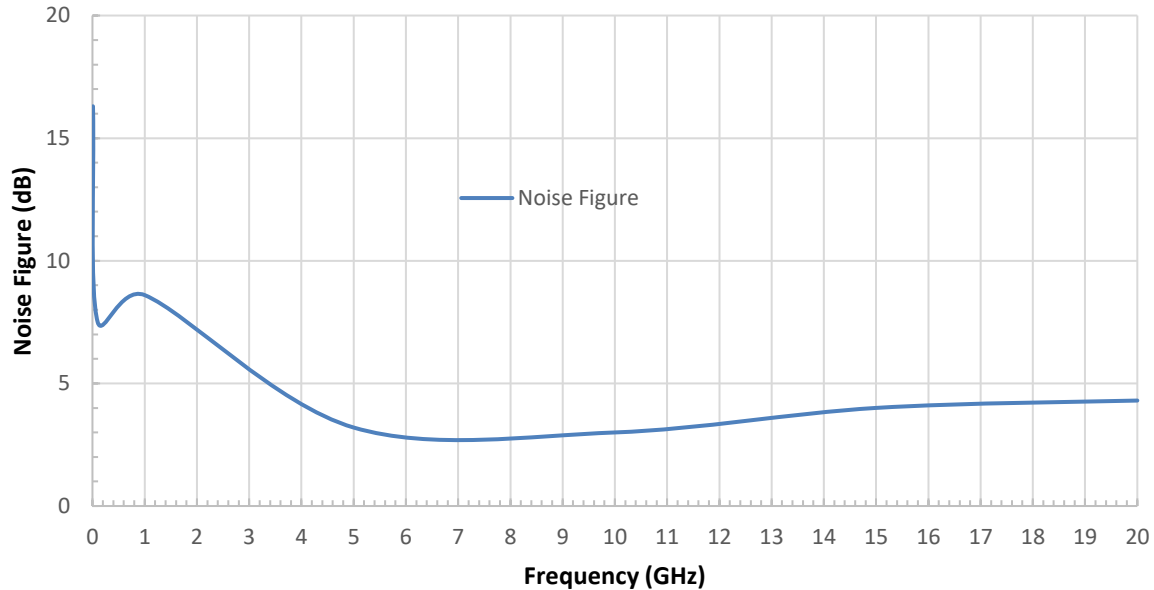
RFsat: +12Vdc/ 230mA



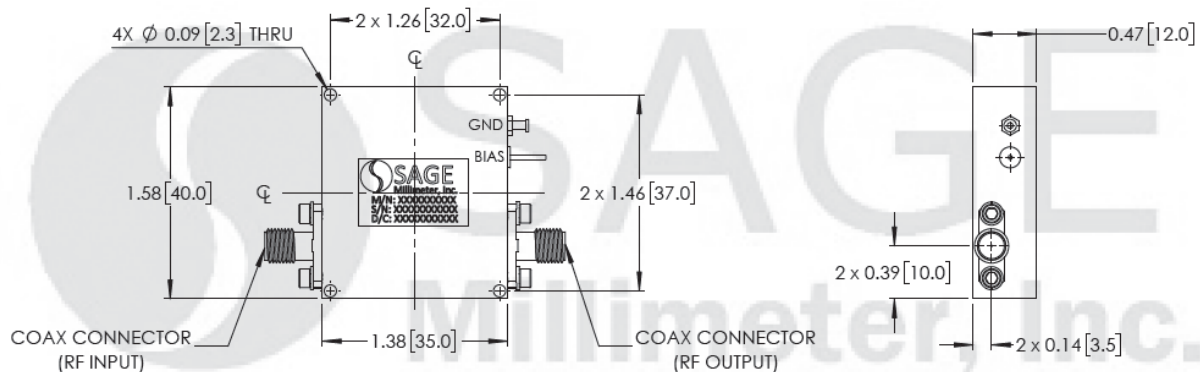
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Noise Figure vs. Frequency

Bias: +12 V_{DC}/217 mA



Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model numbers.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed +50 °C. Use proper heatsink or fan if necessary.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

